

FOREIGN PATENT - ABSTRACT**BASE ISOLATION SUPPORT STRUCTURE FOR CONSTRUCTION****PATENT APPLICATION NUMBER- 07191118****PUBLICATION DATE- 1997-01-14****APPLICANT(S)- KAWASAKI HEAVY IND LTD**

PROBLEM TO BE SOLVED: To improve a base isolation function, by fixing the upper end of a rubber support mechanism to a horizontal member and providing a frictional structure in which a plurality of friction plates are put between a foundation structure and the lower end of the rubber support mechanism.

SOLUTION: When a bridge girder 7 thermally expands or contracts in an ordinary time, the bridge girder 7 moves horizontally by a frictional structure 20. When a horizontal load acts on the bridge girder 7 in an earthquake, at first, a rubber support structure 10 is elastically deformed to attenuate the horizontal load acting on the bridge girder. Next, the lower base plate 15 of the support structure 10 slides on the first friction plate 21 and the frictional slide between the base plate 15 and the friction plate is regulated by the first stop mechanism 25. The friction plate 21 slides with friction on the second friction plate until it is restricted by the second stop mechanism 27 to further attenuate the horizontal load. In this time, the frictional characteristics of the first and second friction plates 21, 22 are made different from each other. In this way, the frictional coefficient on the sliding friction face is prevented from decreasing due to the friction and the attenuating function of a horizontal load can be improved.

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